

Breast Feeding—the Community Norm. Report of a Workshop

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RESEARCH FINDINGS HAVE DOCUMENTED the benefits of human milk and lactation for babies and mothers. One of the “Health Promotion/Disease Prevention Objectives for the Nation” (1) is that, by the year 1990, the proportion of women who breast feed their babies should be increased to 75 percent at hospital discharge and 35 percent at 6 months of age.

The last decade has seen a steady increase in breast feeding, predominantly among middle- and upper-income, educated, white women. The Surgeon General’s Workshop on Breastfeeding and Human Lactation was convened at the University of Rochester on June 11–12, 1984, to identify and to recommend strategies that will reduce the barriers that interfere with breast feeding, especially in those population groups with low prevalence of breast feeding—among women who are low income, less educated, and members of a minority group.

Under the leadership of Ruth A. Lawrence, MD, and Henry A. Thiede, MD, 100 invited participants from more than a dozen disciplines contributed to the workshop their expertise acquired in a wide variety of practice settings serving different ethnic and cultural groups throughout the nation. Professional and lay organizations, local, State, and Federal Governments, industry, and volunteer groups were represented.

The workshop provided an opportunity:

- to review past efforts, in both public and private sectors, to promote breast feeding;
- to assess the state of the art related to factors that enhance and those that inhibit breast feeding and human lactation;
- to determine remaining issues;
- to develop strategies and recommendations in order to facilitate progress toward achieving the 1990 objective.

Building on the model of the Healthy Mothers/Healthy Babies (HM/HB) Coalition, the participants of this workshop included representatives of major professional and lay organizations. It was assumed that these organizations working in the public and private sectors would play a major role in the dissemination and implementation of the national recommendations. A full report of the workshop has been published and widely disseminated by the Public Health Service (2).

Review of Past Efforts

Historically, the Federal Government has actively promoted breast feeding. During the years 1946–47 Dr. Katherine Bain, of the Children’s Bureau, conducted the first nationwide survey on the incidence of breast feeding in hospitals in the United States. This report was published in *Pediatrics* in September 1948 (3).

A symposium on human lactation, held at George Washington University in October 1976, was jointly sponsored by the Public Health Service (PHS), March of Dimes, and the university. The proceedings of that symposium were disseminated throughout public health circles (4). Supported by the PHS, an annotated bibliography on breast feeding was published in 1978 by the National Academy of Sciences (NAS) (5).

Then on April 7, 1983, a nationwide video-teleconference on improving the nutrition of mothers and babies was cosponsored by the Department of Health and Human Services (DHHS) and the U.S. Department of Agriculture (USDA). “Breastfeeding and Human Lactation” was one of the two major topics presented during this 3-hour program viewed by nutrition and health professionals at 125 sites coast-to-coast. New research findings were presented with special emphasis on their practical application. Edited videotapes of the teleconference

are available for loan and for sale (National Center for Education in Maternal and Child Health, 3520 Prospect St. NW, Washington, DC 20057).

Breast feeding promotion is one of the aims of the HM/HB Coalition. A breast feeding kit for professionals has been produced in collaboration with several professional organizations, voluntary associations, the DHHS, and the USDA. The National Center for Health Statistics' (NCHS) National Natality Survey is an ongoing surveillance and reporting mechanism for the educational factors associated with breast feeding.

In response to the International Code of Marketing of Breast-milk Substitutes (6), the Assistant Secretary for Health in November 1981 established two task forces. The first of these, a PHS Task Force on the assessment of scientific evidence relating to problems of infant feeding, had its findings published as a supplement to Pediatrics in October 1984 (7). The second, the Interdepartmental Task Force, incorporated its findings in a U.S. report to the World Health Assembly in May 1984.

The current roles of the Federal Government in promoting breast feeding to meet the already-mentioned 1990 national objective include the following:

- establishing and promulgating policy;
- offering professional consultation and technical assistance to providers;
- supporting professional training;
- conducting research;
- implementing the delivery of services;
- sponsoring public education.

Policy. Guidelines and policies on nutrition issued by recognized professional organizations such as the NAS, American Academy of Pediatrics (AAP), American College of Obstetricians and Gynecologists, American Academy of Family Physicians, and Association of State and Territorial Health Officials are used by the PHS in formulating policies and recommendations in maternal and child nutrition.

Professional consultation and technical assistance. Professional consultation and technical assistance on maternal nutrition, lactation, and infant nutrition are made available through both guidance materials and technical references developed in concert with professional organizations. For example, recommendations on breast feeding and other information on infant feeding are addressed in the "Pediatric Nutrition Handbook" published by the AAP with support by the PHS' Division of Maternal and Child Health (DMCH) (8). An example of a more recently developed technical reference is "Guide to Breast Feeding the Infant with PKU" (9).

'A revival of interest in the composition of human milk and the special functions of its many components has been stimulated by the necessity of devising proper nutrient therapy for premature, growth-retarded, and immunologically compromised babies.'

Professional training. Breast feeding is part of the curriculum of graduate training programs in public health nutrition and in the MCH graduate curriculum for physicians, nurses, social workers, and other health care providers. For example, over the last 10 years, 200 public health nutrition trainees have received Title V MCH support, and more than 1,000 have received support from the Bureau of Health Professions, Health Resources and Services Administration (HRSA).

Research. Research and study form the basis for policy and practice. In government, the National Institutes of Health plays a major Federal role in breast feeding research efforts. A revival of interest in the composition of human milk and the special functions of its many components has been stimulated by the necessity of devising proper nutrient therapy for premature, growth-retarded, and immunologically compromised babies. The National Institute of Child Health and Human Development has encouraged studies of immunologic and nutrient composition, as well as perhaps undefined components and possible contaminants of colostrum and human milk obtained from mothers delivering babies at various gestational ages. The Institute and the DMCH are jointly supporting a study of the determinants of infant feeding: breast versus bottle.

Service delivery. The staffs of health care programs supported by the Health Resources and Services Administration are working with their clients in promotion and support of breast feeding. A variety of successful models have been developed by State and local public health departments, community health centers, and Indian Health Service hospitals and clinics.

Public education. The PHS has developed educational materials on nutrition for use in counseling parents and other caregivers of children in community health education programs. One example of these materials is "Breast Feeding," a publication developed in 1979 and aimed at parents-to-be and new parents (10). States frequently use MCH funds to develop and disseminate educational materials.

'Cultural norms guide decisions about breast feeding and influence support for this practice. Cultural attitudes must be taken into account in the design of intervention programs.'

State of the Art

Human lactation as a physiologic process (II). Lactation is the physiologic completion of the reproductive cycle. In the mother the breast, the body, and the psyche are prepared for lactation during pregnancy. The newborn infant is prepared to suckle at the breast at birth.

Lactation involves three major stages of activity: (a) mammatogenesis—mammary growth, which begins embryonically and culminates during pregnancy; (b) lactogenesis—the initiation of milk secretion, which begins in pregnancy and increases at delivery; (c) galactopoiesis—maintenance of established lactation, which begins a few days postpartum and continues as long as there is stimulus.

The breast does not function in isolation, but in synchrony and balance with the maternal endocrine system. The process of milk synthesis is complex. There is a marked alteration of the maternal metabolism with a redistribution of the blood supply and an increased demand for nutrients. The mammary blood flow, cardiac output, and milk secretion are suckling-dependent. These changes in turn trigger the hypothalamus to release prolactin to act on the mammary cells. Milk is iso-osmolar with plasma in all species. Although milks of different species vary tremendously, each is physiologic for the growth demands of that species.

A mother delivering a previable infant at 16 weeks' gestation will secrete colostrum. As early as 24 weeks, lipid droplets can be seen in the alveolar cells. The composition of the secretion is fairly consistent from 16 or 17 weeks right up to the time of delivery.

The body stores nutrients during pregnancy that are intended for the manufacturing of milk in the postpartum period. Eight to 10 pounds of added weight (neither fetus, placenta, uterus, nor fluid) are carefully stored for future nutrient and energy needs. The body stores reflect the cumulative dietary intake of pre-pregnancy and pregnancy coupled with the short-term dietary variation to ensure daily sources of both macro- and micronutrients. Thus the daily nourishment provided through the milk is consistent and balanced.

Lactation influences the mother's return to prepregnant state. Getting back "in shape" is facilitated by utilizing

the extra weight of pregnancy for milk production. Thus, breast feeding women return to baseline weight more quickly. The direct effect of the oxytocin released on the stimulus of suckling not only contracts the myoepithelial cells for milk ejection but also contracts the uterus for faster physiologic involution and increased tone.

In most anticipated normal pregnancies, the hormonal milieu triggers latent maternal instincts and leads to anticipation of holding the infant closely to the breast and providing continued nourishment. Parenthood potentially provides the opportunity for psychological growth from the egocentricity of adolescence to an adult self-concept in which the mother cares for and nourishes this new being. The mind, however, is not controlled by body function alone. Many societal, community, family, and individual forces influence attitudes and feelings about breast feeding.

The infant is prepared to suckle shortly after birth. The newborn already has been making sucking motions in utero. Part of the balance of the amount of amniotic fluid depends upon the fetus sucking and swallowing fluid in utero. Until birth, the infant has not had to synchronize this action with breathing, but, as Tizzard showed in England some years ago, suckling at the breast is compatible with continuous breathing compared to the suck-swallow-breathe pattern of the infant while bottle feeding. The infant also has a rooting reflex which helps him or her turn to grasp the nipple. The normal newborn infant adapts to breast feeding readily.

When the infant grasps the nipple and areola, the sucking stimulates the nerve fibers in the nipple and these, in turn, stimulate the afferent nerve fibers via the spinal cord to the mesencephalon and the hypothalamus in the maternal brain and trigger the pituitary to release two hormones—prolactin and oxytocin. The prolactin stimulates the synthesis and secretion of milk itself. The oxytocin rapidly causes the ejection of milk from alveoli and smaller ducts into larger lactiferous ducts and sinuses by stimulating the myoepithelial cells to contract. The myoepithelial cells (or basket cells) are wrapped about the ducts and, when they contract, milk is ejected. Milk ejection involves both neural and endocrine stimulation and response. A neural afferent pathway and an endocrine efferent pathway are required, but this stimulus is triggered predominantly by touch and not by pressure of a full milk gland. This response may be inhibited by pain or stress.

The unique values of human milk. Recommendations of human milk as the ideal nutrient source for term infants are common (12,13). These endorsements and the growing clinical interest in its use have prompted a remarkable increase in studies of human milk. The results of such investigations have underscored the dual roles

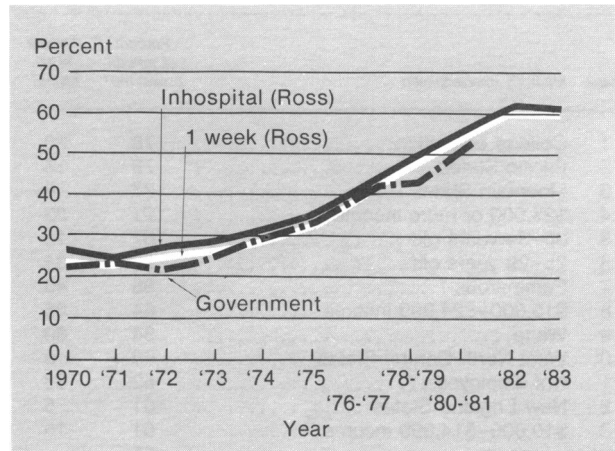
played by its constituents: (a) the classic role which is associated with most nutrients, that is, the provision of enzymatic cofactors or substrates for energy or structural components, and (b) a more complex role which is the performance of functions that complement the developing abilities of maturing infants.

The unique pattern of constituents in human milk and the feeding practices inherent in breast feeding appear to result in distinctive levels of milk intake for breast- and formula-fed infants. Recent data indicate that the intake of breast fed infants plateaus at approximately 733 grams per day through the first 4 months of lactation. Therefore, on a body weight basis, the energy intake falls from approximately 110 to 70 kilocalories per kilogram by the fourth month (14). These intakes are substantially below those of formula-fed infants and below levels currently recommended for this age group by the National Research Council. Despite these differences between recommended amounts and observed intakes, exclusively breast fed infants appear to grow well. Current measurements of the intakes of infants whose diets are supplemented *ad libitum* with solids do not support the view that human milk may become limiting by the fourth month for most infants. Results of these recent studies indicate that when the diet of the exclusively breast fed infant is complemented with solid foods, intakes remain at approximately 70 kilocalories per kilogram of body weight, and infants continue to grow well (15). These findings suggest that a child's energy intake is dependent upon the mode of feeding.

The issues raised by the differences between energy and protein intakes of formula- and human milk-fed infants are interrelated with the *in vivo* roles of milk components that have potentially protective functions. Of these components, those with protective functions have been examined most actively. Secretory IgA (SIgA) is the predominant immunoglobulin in human milk and is thought to represent one of its key protective agents. Specific SIgA antibodies are found against a wide array of bacterial and viral organisms (16). This protein has the ability to adhere to mucosal surfaces and prevent the subsequent attachment, and possibly the invasion, of specific infectious agents (17, 18).

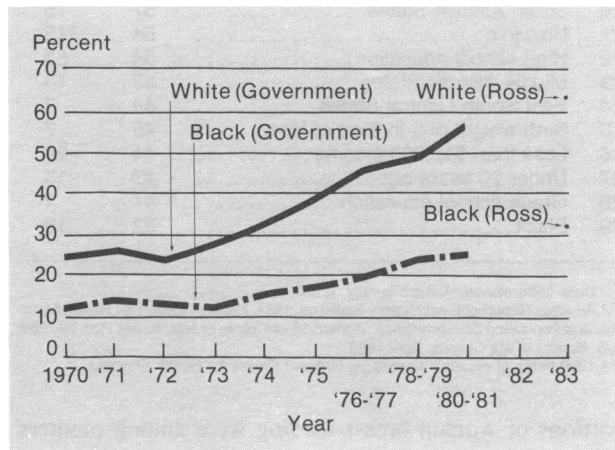
Although the available data are not conclusive, they generally support the theory that human milk provides components that complement a developing immune system in the infant. It is not known whether these complementary components participate in the improved development of active immunoprotective abilities. They may serve as substitutes until the infant matures sufficiently to mount an active immune response. Whether the protective effects of human milk components are made real or potential by environmental conditions, such benefits are available only if the infant is breast fed.

Figure 1. Percent of infants breast fed by year, United States, 1970-83



SOURCES: Ross Laboratories' national mothers' survey and the National Survey of Family Growth, National Center for Health Statistics.

Figure 2. Percent of infants breast fed by race, United States, 1970-83



SOURCES: Ross Laboratories' national mothers' survey and the National Survey of Family Growth, National Center for Health Statistics.

Trends in breast feeding. In 1972, the incidence of breast feeding declined to its lowest level—22 percent (19). Since then breast feeding increased to 61.9 percent in 1982 and declined marginally to 61.4 percent in 1983 (20-23). Figure 1 illustrates this trend in breast feeding, and figure 2 shows the incidence of breast feeding among white and black infants according to unpublished data from the mothers' survey conducted yearly by the Ross Laboratories.

There is considerable variation among cultural groups in the proportion of women who breast feed their infants. Women who breast fed in 1983 are ranked in table 1 by demographic characteristics. The highest incidence occurred among the well-educated, the relatively affluent, the somewhat older women, and those living in the western part of the country. Conversely, the lowest pro-

Table 1. Demographic characteristics of all women giving birth and those who breast fed in 1983, by rank order

Rank	Mother's characteristic	Percent of infants breast fed ¹	Percent of all births ²
1	College education.....	78	33
2	Pacific States.....	78	16
3	Mountain States.....	77	6
4	\$25,000 or more income.....	71	32
5	30-34 years old.....	67	16
6	25-29 years old.....	65	31
7	Primiparous.....	65	43
8	\$15,000-\$24,999 income.....	64	26
9	White.....	64	80
10	West North Central States.....	63	8
11	Not employed.....	62	65
12	New England States.....	61	5
13	\$10,000-\$14,999 income.....	61	15
	National mean.....	61	...
14	Employed.....	60	35
15	35 years or older.....	60	5
16	East North Central States.....	59	18
17	Multiparous.....	58	57
18	West South Central States.....	58	13
19	20-24 years old.....	57	33
20	South Atlantic States.....	57	15
21	Hispanic.....	54	³ 15
22	High school education.....	54	63
23	Middle Atlantic States.....	52	13
24	East South Central States.....	49	7
25	Birth weight of 5 lb 8 oz or less.....	46	7
26	Less than \$10,000 income.....	44	26
27	Under 20 years old.....	43	15
28	Grade school education.....	41	4
29	Black.....	32	16

¹ Ross Laboratories' mothers' survey, 1983.

² Advance Report of Final Natality Statistics, 1981, National Center for Health Statistics, and Population Characteristics. Women 18-44 Years of Age. Series P20, No. 386, U.S. Bureau of the Census, April 1984.

³ 1980 births of Hispanic parentage, National Center for Health Statistics.

portions of women breast feeding were among mothers under 20 years, the grade-school educated, those with low incomes, those who were black, and the residents of the East South Central part of the country (Kentucky, Tennessee, Alabama, and Mississippi).

Among black women, as among all U.S. women, the lowest incidence of breast feeding occurred among the young and those with low incomes and, as was true among all women, the highest incidence of breast feeding occurred among those blacks with the most education and income (table 2).

The duration of breast feeding declined in 1971 to its lowest level of 9 percent breast feeding 3 months or longer. Since then, breast feeding for at least 3 months has increased to 40 percent of all women giving birth in 1983. The proportion of black women breast feeding their infants in 1983 for 3 months or longer was 20 percent—less than half of the 42 percent of white women breast feeding for 3 months or more, according to data from the Ross Laboratories' yearly surveys of mothers.

The decision to breast feed is made by well over half of the women prior to pregnancy. In 1981, 55 percent of breast feeding women had made that decision before becoming pregnant and, in 1984, that number had increased to 63 percent. An additional 14 percent of breast feeders made the decision during their first trimester and, by the time of delivery, 98 percent of the breast feeding women had made their decision. Researchers in a prospective study, who asked women what they intended to feed their infants and subsequently contacted them after the birth, found that 96 percent had implemented their prenatal decision to breast feed (24).

The cultural context of breast feeding. Research on breast feeding in the United States reflects two biases. First, ethnicity, and sometimes even socioeconomic status, are not mentioned. Second, reports mentioning ethnicity and socioeconomic status often focus on incidence statistics without discussing correlates such as attitudes, reasons for the observed behaviors, and the influence of sociocultural background.

The U.S. ethnic groups frequently discussed—A-
sians, blacks, Latinos, and Native Americans—are each

Table 2. Demographic characteristics of all women giving birth and black women who breast fed in 1983, by rank order

Rank	Mother's characteristic	Percent of black infants breast fed ¹	Percent of black births ²	Percent of all births ²
1	Pacific States.....	61	9	16
2	Mountain States.....	60	1	6
3	\$25,000 or more income.....	56	13	32
4	College education.....	55	22	33
5	New England States.....	54	2	5
6	\$15,000-\$24,999 income.....	45	18	26
7	Employed.....	41	33	35
8	35 years or older.....	41	4	5
9	West North Central States.....	38	3	8
10	30-34 years old.....	38	11	16
11	25-29 years old.....	38	24	31
12	Primiparous.....	38	40	43
13	East North Central States.....	36	17	18
14	Middle Atlantic States.....	33	15	13
	National mean.....	32
15	\$10,000-\$14,999 income.....	31	13	15
16	West South Central States.....	31	14	13
17	20-24 years old.....	30	35	33
18	Multiparous.....	29	61	57
19	Birth weight of 5 lb 8 oz or less.....	28	13	7
20	South Atlantic States.....	27	28	15
21	Not employed.....	27	67	65
22	Grade school education.....	27	5	4
23	High school education.....	23	73	63
24	Less than \$10,000 income.....	20	55	26
25	East South Central States.....	20	11	7
26	Under 20 years old.....	15	25	15

¹ Ross Laboratories' mothers' survey.

² Advance Report of Final Natality Statistics, 1981, National Center for Health Statistics and Population Characteristics. Women 18-44 Years of Age. Series P20, No. 386, U.S. Bureau of the Census, April 1984.

in fact a complex set of distinct subgroups, with varying degrees of acculturation and levels of socioeconomic status. Although few studies make comparisons among subcultures in relation to breast feeding, important differences exist (25). For example, a rural southern black and an urban western black are as different from each other as their white regional counterparts. Persons in each subculture group are proud of their heritage; they resent being lumped with others whom they perceive as dissimilar. Unfortunately, most of the literature on breast feeding and ethnicity does not make these subcultural distinctions.

The data on frequency and duration of breast feeding by ethnicity vary greatly by region and by ethnic group. There is relatively little information on Asian populations, and even less on Native American populations. Breast feeding in all populations declined from the beginning of this century until the early 1970s (26,27), and blacks may have experienced the greatest decline (28,29). Prior to 1960, the majority of blacks and Latinos breast fed their first babies and nursed longer than whites (20,26). The trend began to reverse in the early 1970s, but this change appears to be occurring more quickly in white than in Latino, Asian, or black populations.

Few of the underlying factors associated with bottle feeding rather than breast feeding can be directly related to ethnicity, but relate instead to socioeconomic status or are reported by women in all ethnic groups. Cultural values, however, are likely to influence how these factors are interpreted by women. These factors include general perceptions of the value of breast feeding (mostly positive), the baby's father's feelings, embarrassment at the exposure of the breasts, interference with sexuality, questions about the mother's temperament and suitability for breast feeding, anxieties about the mother's ability to produce high-quality and sufficient milk, perception of bottles as convenient, perception of breast feeding as old-fashioned, concerns about breast feeding ruining the figure, and work intentions (29-31).

A great deal is known about attitudes toward breast feeding, barriers, and the reasons for not initiating breast feeding or for early discontinuance. Many of these reasons—such as the need to work and hospital practices—affect women from all ethnic groups, although cultural values and institutions will influence the way these barriers are managed. Research on attitudes and incidence of breast feeding remains important, but it is of greater value when combined with research aimed at reducing hospital barriers and developing and testing high-quality intervention programs. Cultural norms guide decisions about breast feeding and influence support for this practice. Cultural attitudes must be taken into account in the design of intervention programs.

'The working mother who breast feeds often receives negative messages, specifically, that she is attempting to combine mutually incompatible roles and threatening the decisions that others have made to keep the worlds of work and home separate.'

Issues and Recommendations

To utilize fully the expertise of the participants, a major portion of the workshop was devoted to small group deliberations. These work groups considered key issues such as the decision to breast feed, sociocultural influences and determinants of infant feeding practices, support services for mothers who breast feed, roles and responsibilities of the health care system in promoting breast feeding, vocational supports and barriers to breast feeding, education of health professionals and the public about breast feeding, and research needs related to breast feeding and human lactation. Strategies were developed to address these issues.

Although the broad scope of information and the range of views and perspectives exchanged in the work groups cannot be covered adequately in this report, some of the major issues and recommendations are synthesized and presented in capsule form. To provide a convenient framework for followup discussion and action, the deliberations and recommendations were categorized into common themes and are reported under the following six headings: world of work, public education, professional education, health care system, support services, and research.

World of work. Many barriers at work and school can negatively influence a woman's decision to breast feed or her breast feeding experience. These barriers include the following:

- lack of information among members of the general public (including women), employers, health care providers, and other support persons to whom the mother may turn for assistance or advice, or both;
- logistics such as how, when, how often, and where to nurse the baby or to express and store milk for future use;
- a social, psychological, and political climate that significantly separates the worlds of work and home and their related roles. The working mother who breast feeds often receives negative messages, specifically, that she is attempting to combine mutually incompatible roles and

threatening the decisions that others have made to keep the worlds of work and home separate.

In addition, adequate data to target effective promotional efforts directed at working women and those who influence them are missing. Also lacking are the appropriate support systems, for example, prenatal care, paid maternity leave, and flexible work arrangements which are essential for the successful promotion of breast feeding by working mothers.

Recommendation. A national breast feeding promotion initiative directed to all those who influence the breast feeding decisions and opportunities of women involved in school, job training, professional education, and employment is needed.

Public education. Information and education about lactation and breast feeding as a normal process, a part of everyday life, and the preferred method of infant feeding are not universally available. Some existing educational programs lack sensitivity to cultural differences, lifestyles, and socioeconomic levels. Messages and information about breast feeding and lactation conveyed to women, families, care providers, community officials, and the public are often conflicting and not based on fact. The resulting confusion frequently leads to the perpetuation of myths, attitudes, laws and regulations, and other barriers that have a negative impact on the initiation or continuation of breast feeding.

Recommendation. Public education and promotional efforts should be undertaken throughout the school system and the media. Such efforts should recognize the diversity of the audience; should target various economic, cultural, and ethnic groups; and should be coordinated with professional education.

Professional education. Professionals' knowledge about lactation and breast feeding is too often inadequate, ineffective, and—in some situations—unavailable. A national plan to teach professionals this important aspect of maternal and child health care does not exist. Current concerns are related to the following aspects and issues of educational programs:

- need for appropriate curricula that recognize the diversity of sociocultural and economic groups in the population as well as the roles and responsibilities of various health professionals;
- inadequate funding for the preparation of faculty to direct and provide training related to lactation and breast feeding;
- unavailability of educational programs and resources, including faculty and funds, to support the education of practicing professionals;

- lack of appropriate involvement of accreditation and standard-setting bodies to ensure the competence of health professionals and others who teach and counsel about lactation and breast feeding.

Recommendation. It is imperative for all health care professionals to receive adequate didactic and clinical training in lactation and breast feeding and to develop skills in patient education and in the management of breast feeding.

Health care system. How best to support and encourage lactation and breast feeding as the natural and preferred method of infant feeding is a major issue of the system of health care for mothers and children. Concern about lactation and the promotion of breast feeding are not always reflected in the practices of the health care team and in the policies of health care institutions. Support for breast feeding needs to be conspicuous, for example, in primary care, prenatal care, and postpartum care provided in a wide variety of ambulatory care settings as well as in labor, delivery, postpartum, and infant care provided in hospital settings. The current organization and delivery of maternal and child health services and attitudes of health care team members frequently negate support for breast feeding.

Achievement of the goal to increase the incidence and duration of breast feeding will require thorough education of all members of the health care team so that they support lactation and breast feeding as an important and valuable component of family-centered maternity and newborn care. All members of the health care team should have a positive attitude, based on the conviction that lactation has specific and significant advantages for both mother and baby. Accordingly, all providers and facilities should adopt a posture of advocating lactation as the natural and preferred means of infant feeding. This attitude should include institutional policies clearly supportive of lactation and breast feeding.

At present, some Federal programs serving women and children include disincentives to breast feeding. The Federal Government should address these barriers and become committed to the elimination or modification of such policies.

Recommendation. The health care system needs to be better informed and more clearly supportive of lactation and breast feeding.

Support services. It is essential to have a model of care which focuses on the strengths of the family, respects the variations found within different cultural ethnic and economic groups as well as lifestyles, offers a continuum of care to the mother and child throughout the reproductive cycle, and effectively uses community re-

sources to support breast feeding. Yet, far too often many of these attributes are missing. Even those mothers and families who may have received appropriate education and counseling for breast feeding before and during hospitalization do not always have the followup support necessary to cope with problems and questions frequently arising after discharge from the hospital. Although health care providers may do a good job of promoting an informed choice about infant feeding, the important involvement and support throughout the process by the family members, peers, employers, and community resources may be lacking and unrecognized.

Recommendation. The successful initiation and continuation of breast feeding will require a broad spectrum of support services involving families, peers, care providers, and community agencies and organizations.

Research. Basic studies, clinical studies, evaluation studies, and prospective, longitudinal studies related to breast feeding are all needed to improve the information base, establish policy, improve and target strategies, and assess program effectiveness. The following areas of concern need to be investigated:

- epidemiologic studies on the outcome of breast feeding in comparison with other types of feeding among diverse groups of American women;

- infant's outcome with respect to morbidity, physical growth, and both physical and behavioral development;
- physiology and pharmacology of the lactation process, including better data on the medical contraindications to breast feeding;
- behavioral and social-scientific aspects of lactation in particular segments of our society, including barriers to initiation and continuation of breast feeding, resistance of health care providers, and need for—as well as effectiveness of—support services for lactating mothers;
- evaluation of strategies designed to motivate and foster a change in breast feeding behavior;
- cost-benefit research that would provide a scientific basis for development of national policy on breast feeding.

Recommendation. An intensified national research effort, including a broad range of research studies, is needed to provide data on the benefits and contraindications of breast feeding among women in the United States. Research is also needed to evaluate strategies and interventions and to determine progress in achieving goals related to the promotion of breast feeding.

Conclusion

The recommendations presented at this workshop became a national statement synthesized and promulgated by the Office of the Surgeon General with the active

Planning Committee for the Surgeon General's Workshop on Breastfeeding and Human Lactation

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involvement of the many participating professional and lay organizations. This shared approach has been a major factor in the successful outcomes of the two previous workshops. The report of this workshop, like those of the two previous workshops, will be a national, not a Federal, statement.

NOTE

Single copies of the publication "Report of the Surgeon General's Workshop on Breastfeeding and Human Lactation" are available from the National Maternal and Child Health Clearinghouse, 3520 Prospect St. NW, Washington, D.C. 20057.

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